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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
CHEN, CHONGSHAN	

ART UNIT	PAPER NUMBER
2162	

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/900,733	MENIN ET AL.	
	Examiner	Art Unit	
	Chongshan Chen	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 18 October 2004 has been entered.

2. Claims 1-39 are pending in this Office Action.

Response to Arguments

3. Applicant's arguments with respect to claims 1-39 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

MPEP 2106 IV. B.2. (b)

A claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under 35 U.S.C. 101. Schrader, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer-related process must either: (A) result in a physical

transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application within the technological arts.

Claims 1-33, in view of the above cited MPEP section, are not statutory because they merely recite a number of computing steps without producing any tangible result and/or being limited to a practical application within the technological arts. The use of a computer has not been indicated.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blutinger et al. ("Bultinger", US 5,231,566) in view of Tatsuoka (US 6,260,033 B1).

As per claim 1, Blutinger discloses a method for classifying an item, the item having a plurality of attributes, each attribute being a descriptor of a product, and each attribute having a value, the method comprising:

select an item to be classified (Blutinger, Fig. 5, col. 9, lines 39-42);

selecting an attribute of the item from the plurality of attributes, each of the plurality of attributes being defined for the item prior to the selecting of the item (Blutinger, Fig. 5, col. 9, lines 52-67);

comparing the value of the attribute of the item to a set of possible attribute values, the possible attribute values being associated respectively, with item classifications (Blutinger, Fig. 5, col. 9, lines 52-67);

selecting at least one item classification for the item based on the comparison (Blutinger, Fig. 5, step 5, col. 3, lines 45-67).

Blutinger does not explicitly disclose determining a confidence score for each selected item classification for the item. Tatsuoka teaches determining a confidence score for each selected item classification for the item (Tatsuoka, col. 16, lines 2-23). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the classification system of Blutinger by incorporating a confidence score in the same conventional manner as disclosed by Tatsuoka (col. 16, lines 2-23). The motivation being to help the classification system to classify only the most relevant item to a category. This will improve the accuracy of the classification system.

As per claim 2, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 1, and further teach an engineered knowledge base of classifications, each classification

associated with at least one attribute and each attribute associated with at least one attribute value (Blutinger, col. 9, lines 36-67, MASTER CATELOG).

As per claim 3, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim , and further teach

selecting a second attribute of the item if one selected item classification does not have a sufficiently high confidence score (Tatsuoka, col. 16, lines 2-23, Blutinger, Fig. 5, col. 3, lines 45-67);

comparing the value of the second attribute of the item to a set of possible second attribute values, the possible second attribute values being associated, respectively, with item classifications (Blutinger, col. 3, lines 45-67);

selecting at least one item classification for the item based on the second comparison (Blutinger, col. 9, lines 38-67); and

determining a confidence score for each selected item classification of the second comparison (Tatsuoka, col. 16, lines 2-23).

As per claim 4, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 1, and further teach comparing the value of the attribute of the item to a second set of possible attribute values, the possible attribute values being associated respectively, with the item classifications (Tatsuoka, col. 16, lines 2-23); selecting at least one item classification for the item based on the second comparison (Tatsuoka, col. 16, lines 2-23); and determining a confidence score for each selected item classification for the item (Tatsuoka, col. 16, lines 2-23).

As per claim 5, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 3, and further teach each set of possible values comprises an engineered knowledge

base, the engineered knowledge bases comprising at least one of a primary engineered knowledge base of key item attribute values, an engineered knowledge base of a classification schema, and an engineered knowledge base of an alternated classification system (Blutinger, col. 9, lines 36-67, MASTER CATELOG).

As per claim 6, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 5, and further teach the engineered knowledge base of a classification schema contains a plurality of item classifications mapped to a second classification schema (Blutinger, col. 9, lines 36-67).

As per claim 7, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 1, and further teach comparing the value of the attribute and selecting at least one item classification are performed independent of a subject matter of the item classifications, the subject matters including one or more of electronic, office products, and medical supplies (Blutinger, col. 3, lines 45-67).

As per claim 8, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 1, and further teach comparing the value of the attribute and selecting at least one item classification are performed independent of a language of the item and independent of a language of the set of possible attribute values (Blutinger, col. 3, lines 45-67).

As per claim 9, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 1, and further teach the attribute is a part number of the item (Blutinger, col. 9, lines 38-67).

As per claim 10, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 1, and further teach the attribute is a description of the item (Blutinger, col. 9, lines 38-67).

As per claim 11, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 1, and further teach comparing the value of the attribute comprises performing a search for a matching value among the set of possible attribute values (Blutinger, col. 9, lines 38-67).

As per claim 12, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 1, and further teach comparing the value of the attribute comprises performing a search for a value among the set of possible attribute values that is within a range (Blutinger, col. 9, lines 38-67).

As per claim 13, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 1, and further teach determining a confidence score comprises determining a percentage of items in an item classification that contain an attribute value found in the respective comparison and assigning a higher confidence score for attribute values contained in a higher percentage of items in the respective item classification (Tatsuoka, col. 16, lines 3-23).

As per claim 14, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 1, and further teach determining a confidence score comprises determining a degree of similarity between the value of the attribute and the corresponding attribute value of the selected item classification (Tatsuoka, col. 16, lines 3-23).

As per claim 15, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 1, and further teach presenting the item and the selected item classifications from the comparison to a user (Blutinger, Fig. 2A).

As per claim 16, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 1, and further teach the confidence scores are presented to the user in association with the corresponding item classifications (Tatsuoka, col. 16, lines 3-23).

As per claim 17, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 1, and further teach analyzing the attribute value of the item against a stop list and excluding any stop list words from the comparison (Blutinger, col. 3, lines 45-67).

As per claim 18, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 1, and further teach presenting the selected item classifications to a user; receiving a designation from the user of at least one selected item classification; and classifying the item in the designated item classifications (Blutinger, col. 3, lines 45-67).

As per claim 19, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 1, and further teach comparing confidence scores for all selected item classifications and classifying the item in at least one of the selected item classifications based on the confidence score comparison (Tatsuoka, col. 16, lines 3-23).

As per claim 20, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 1, and further teach automatically classifying an item if the confidence score is above a threshold and presenting the selected item classifications to a user if the confidence score is below the threshold (Tatsuoka, col. 16, lines 3-23).

As per claim 21, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 1, and further teach comparing the value of the first attribute comprises successively executing a plurality of searches, each successive search having more general criteria and wherein determining a confidence score comprises assigning a lower confidence score to the results of each successive search (Tatsuoka, col. 16, lines 3-23).

As per claim 22, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 1, and further teach selecting a classification for the item; supplementing the set of possible attribute values with attribute values of the item (Blutinger, col. 3, lines 45-67).

As per claim 23, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 22, and further teach set of possible attribute values initially contains no attribute values, the method further comprising repeating selecting an attribute, comparing the value of the attribute, selecting at least one item classification, selecting a classification, and supplementing the set of possible attribute values for a plurality of items so that as each item is classified, the set of possible attribute values is increased (Blutinger, col. 9, lines 38-67).

As per claim 24, Blutinger discloses a method for classifying an item, the item being associated with a plurality of descriptive terms, the method comprising:

selecting an item to be classified, the plurality of descriptive terms defined for the item prior to the selecting of the item (Blutinger, col. 3, lines 45-67);

searching a reference list of descriptive terms to find descriptive terms corresponding to the descriptive terms associated with the item, the reference list of descriptive terms including at least one item classification for each descriptive term and a confidence score for each item classification of each descriptive term (Blutinger, col. 9, line 38 – col. 10, line 37);

compiling the item classifications and associated confidence scores for each found corresponding descriptive term in the reference list (Blutinger, col. 9, line 38 – col. 10, line 37);

ranking the item classification for each found descriptive term using the compiled confidence scores (Blutinger, col. 9, line 38 – col. 10, line 37).

Blutinger does not explicitly disclose determining a confidence score for each item classification. Tatsuoka teaches determining a confidence score for each classification (Tatsuoka, col. 16, lines 2-23). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the classification system of Blutinger by incorporating a confidence score in the same conventional manner as disclosed by Tatsuoka (col. 16, lines 2-23). The motivation being to help the classification system to classify only the most relevant item to a category. This will improve the accuracy of the classification system.

As per claim 25, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 24, and further teach successively executing a plurality of searches, each successive search having more general criteria and wherein compiling the confidence scores comprises adjusting the confidence scores so that a score is lowered for each successive search in which the corresponding descriptive term is first found (Blutinger, col. 9, line 38 – col. 10, line 37).

As per claim 26, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 24, and further teach presenting the item classification and rankings to a user (Blutinger, col. 10, lines 3-15).

As per claim 27, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 24, and further teach receiving a designation of at least one item classification

from the user; and classifying the item in the designated classifications (Blutinger, Fig. 4, col. 9, line 38 – col. 10, line 37).

As per claim 28, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 24, and further teach automatically classifying an item if the confidence score is above a threshold and presenting the selected item classifications to the user if the confidence score is below the threshold (Tatsuoka, col. 16, lines 3-23).

As per claim 29, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 24, and further teach the descriptive terms in the reference list are associated with possible attributes of the item and wherein the confidence score depends upon the attribute with which the descriptive term is associated (Blutinger, col. 9, line 38 – col. 10, line 37).

As per claim 30, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 24, and further teach searching for descriptive terms associated with the same attribute as the attribute of the item associated with the searched descriptive term (Blutinger, col. 9, line 38 – col. 10, line 37).

As per claim 31, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 24, and further teach classifying the item in at least one of the item classifications for a found descriptive term; and supplementing the reference list with descriptive terms associated with the item (Blutinger, col. 9, line 38 – col. 10, line 37).

As per claim 32, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 24, and further teach the reference list comprises an engineered knowledge base, the engineered knowledge base comprising at least one of a primary engineered knowledge base of key item attribute values, an engineered knowledge base of a classification schema, and

an engineered knowledge base of an alternated classification system (Blutinger, col. 9, lines 38-67, MASTER CATALOG).

As per claim 33, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 24, and further teach the engineered knowledge base of a classification schema contains a plurality of item classification mapped to a second classification schema (Blutinger, col. 9, lines 38-67).

As per claim 34, Blutinger discloses a machine-readable medium having stored thereon data representing sequences of instructions which, when executed by a machine, cause the machine to perform operations comprising:

selecting an item to be classified (Blutinger, col. 3, lines 45-67);

selecting an attribute of the item, the item having a plurality of attributes, each attribute having a value and a predetermined weighting factor associated therewith, the plurality of attributes being defined prior to the selecting of the item (Blutinger, Fig. 4, col. 9, line 38 – col. 10, line 37);

comparing the value of the selected attribute of the item to a set of possible attribute values, the possible attribute values being associated respectively, with item classifications (Blutinger, col. 3, lines 45-67);

selecting at least one item classification for the item based on the comparison Blutinger, col. 3, lines 45-67).

Blutinger does not explicitly disclose determining a confidence score for each selected item classification for the item based on at least the weighting factor associated with the selected attribute. Tatsuoka teaches determining a confidence score for each selected item classification

for the item (Tatsuoka, col. 16, lines 2-23). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the classification system of Blutinger by incorporating a confidence score in the same conventional manner as disclosed by Tatsuoka (col. 16, lines 2-23). The motivation being to help the classification system to classify only the most relevant item to a category. This will improve the accuracy of the classification system.

Claims 35-36 are rejected on grounds corresponding to the reasons given above for claims 3-4.

As per claim 37, Blutinger discloses an apparatus for classifying an. item, the item having a plurality of attributes, each attribute having a value and a predetermined weighting factor associated therewith, the apparatus comprising:

a classification knowledge database containing a plurality of values, each associated with at least one category (Blutinger, col. 9, line 38 – col. 10, line 37);

a search engine to select an attribute of the item, to compare the value of the attribute of the item to a set of possible attribute values of the classification knowledge database, to select at least one item classification for the item based on the comparison, wherein the attribute of the item are defined prior to selecting the item for classification (Blutinger, col. 9, line 38 – col. 10, line 37).

Blutinger does not explicitly disclose determining a confidence score for each selected item classification for the item based on at least the weighting factor associated with the selected attribute. Tatsuoka teaches determining a confidence score for each selected item classification for the item (Tatsuoka, col. 16, lines 2-23). Therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to modify the classification system of Blutinger by incorporating a confidence score in the same conventional manner as disclosed by Tatsuoka (col. 16, lines 2-23). The motivation being to help the classification system to classify only the most relevant item to a category. This will improve the accuracy of the classification system.

As per claim 38, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 37, and further teach selecting a second attribute of the item if one selected item classification does not have a sufficiently high confidence score, to compare the value of the second attribute of the item to a set of possible second attribute values, of the classification knowledge database, to select at least one item classification for the item based on the second comparison, and to determine a confidence score for each selected item classification of the second comparison (Tatsuoka, col. 16, lines 2-23).

As per claim 39, Blutinger and Tatsuoka teach all the claimed subject matters as discussed in claim 37, and further teach comparing the value of the attribute of the item to a second set of possible attribute values, the possible attribute values being associated, respectively, with the item classifications, to select at least one item classification for the item based on the second comparison, and to determine a confidence score for each selected item classification for the item (Tatsuoka, col. 16, lines 2-23).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chongshan Chen whose telephone number is (571)272-4031. The examiner can normally be reached on Monday - Friday (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (571)272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chongshan Chen
December 6, 2004

JEAN M. CORRIELUS
PRIMARY EXAMINER